

CLAIMS

1. A marine propulsion system for a boat having an engine with a crankshaft mounted on existing motor mounts in the stern of the boat inboard of a transom, said engine having an output shaft inboard of the transom, the said system comprising:

- (a) a transmission coupled to the said output shaft, said transmission extending at least partly through the transom and having an output;
- (b) a stern drive unit coupled to the output of the said transmission spaced outboard of said transom; and
- (c) a stern drive extension housing exterior of the boat enclosing the extending part of the transmission and extending between the transom and said stern drive.

2. The propulsion system of Claim 1 wherein said transmission is a manual transmission.

3. The propulsion system of Claim 1 wherein said transmission is an automatic transmission.

4. The propulsion system of Claim 1 wherein the transmission has a low gear ratio of between 1:1 to 2:1 and a high gear ratio of 1:1.

5. The propulsion system of Claim 3 wherein the transmission has an electronic controller.

6. The propulsion system of Claim 3 wherein the transmission has an electric controller.

7. The propulsion system of Claim 5 wherein said transmission controller shifts the transmission in response to a control signal.

8. The propulsion system of Claim 6 wherein the said control signal is generated by engine speed.

9. The propulsion system of Claim 1 including an engine and transmission coupler connected in torque transmitting association between said crankshaft and a multi-speed shifting mechanism input shaft.

10. The propulsion system of Claim 1 including a transmission and stern drive coupler connected in torque transmitting association directly and between a multi-speed shifting mechanism output shaft and said stern drive having input shaft and gear shifting capabilities.

11. The propulsion system of Claim 1 wherein said stern drive extension housing is mounted to boat transom.

12. The propulsion system of Claim 1 including a shift mechanism having shifting capabilities controlled by a control valve.

13. The propulsion system of Claim 1 wherein said system is retrofit to an existing marine drive.

14. A method of retrofitting an existing marine stern drive propulsion system for a boat having an engine mounted on mounts in the stern of a boat inboard of the transom, said engine having an output shaft, said method comprising:

- (a) coupling a transmission to the motor output shaft with the transmission extending at least partly outboard of the transom;
- (b) coupling the transmission to the input of a stern drive unit; and
- (c) securing a stern drive extension housing to the transom to enclose at least a part of the transmission.

15. The method of Claim 14 wherein said transmission is a manual transmission.
16. The method of Claim 14 wherein said transmission is an automatic transmission.
- 5 17. The method of Claim 14 wherein the transmission has a gear ratio of between 1:1 to 2:1 and a high gear ratio of 1:1.
18. The method of Claim 14 wherein the transmission has an electronic control.
- 10 19. The method of Claim 18 wherein said transmission controller shifts the transmission in response to a control signal.
20. The stern drive system of Claim 19 wherein the control signal is generated by engine speed.
- 15 21. The method of Claim 14 including an engine and transmission coupler connected in torque transmitting association directly between said crankshaft and a multi-speed shifting mechanism input shaft.
- 20 22. The method of Claim 14 including a transmission and stern drive coupler connected in torque transmitting association directly and between said multi-speed shifting mechanism output shaft and said stern drive with input shaft and gear shifting capabilities.
- 25 23. The method of Claim 14 wherein said stern drive extension housing is mounted to a boat transom.
24. The method of Claim 22 wherein said multi-speed shift mechanism is controlled by control valves.